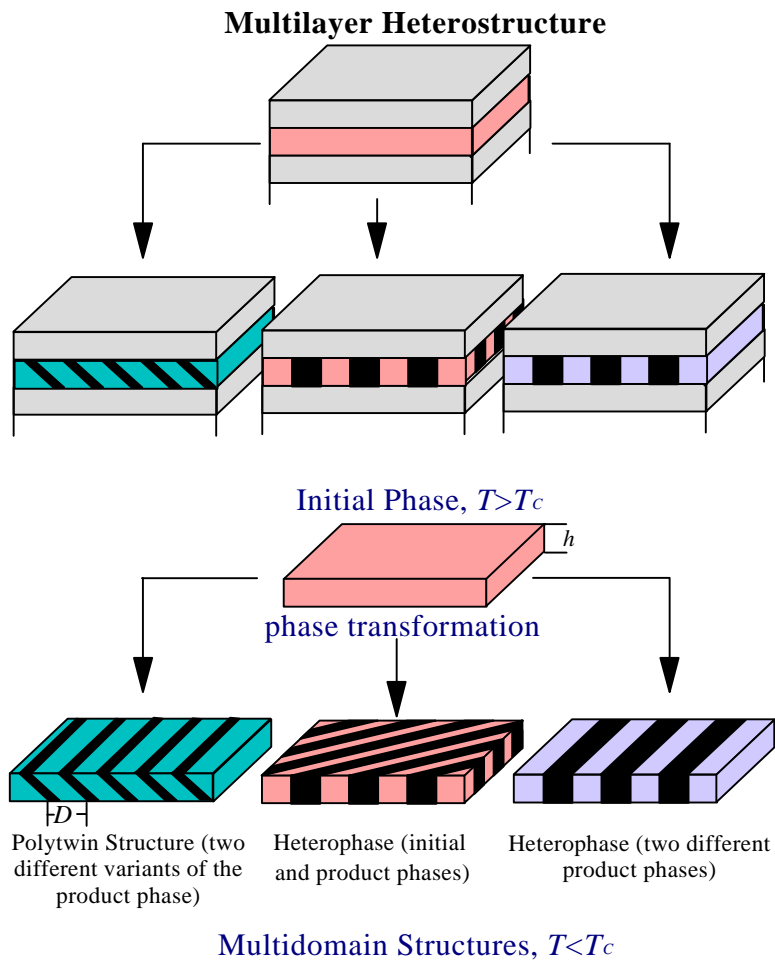


Strain-Controlled Polydomain Heterostructures



➤ Phase transformations in constrained layers, particularly in epitaxial films or multilayers, may result in the formation of transversely modulated structures.

➤ Due to the elastic interaction between the layers of a heterostructure, they transform into sets of periodically alternating lamellae, or domains.

➤ A polydomain layer can consist of either differently oriented domains of the same phase (twins) or domains of different phases.

➤ Domain period (D) is determined by the competition of the interdomain interface energy, g , and the elastic energy, e , of interlayer misfit.

$$D = (gh/e)^{1/2}$$